

REMARKS

Claims 1-11 are pending in this application, claims 10 and 11 having been added. Claims 1 and 9 have been amended without narrowing the claims, as explained below. In light of the amendments and remarks set forth below, Applicants respectfully submit that each of the pending claims is in immediate condition for allowance and request favorable reconsideration.

Applicants note that the Examiner initialed the cited document JP-03 277411 in the November 8, 2002 Office Action, but also struck through the citation with an indication that it is not relevant. It is requested that the Examiner give a complete indication that the reference was considered, since its citation was made in accordance with the rules. A clean copy of the initial PTO-1449 is provided for the convenience of the Examiner.

New independent claims 10 and 11 incorporate the features of claims 7 and 8, respectively, which were indicated to be allowable in the Office Action, including any intervening claims. For this reason, claims 10 and 11 are believed clearly in condition for allowance. Claims 7 and 8 have now been cancelled since they have effectively been rewritten in independent form by the new claims.

Claims 1 and 9 were objected to due to an informality. Each has been amended solely to correct this minor informality. The amendments to these claims in no way narrow their scope and only improves their idiomatic English but replacing "plurality" with "a plurality."

Claims 1, and 3-6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 1,801,490 (Falstrom). Claims 1, 2 and 9 stand rejected under 35 U.S.C. § 103 as obvious from Falstrom in view of U.S. Patent No. 4,610,185 ("France"). Applicants respectfully traverse this rejection and submit that the claims are patentable for at least the following reasons.

Claim 1 relates to a construction to position a punch relative to a die.

According to aspects of the invention, the punch and the die have planes to be simultaneously fitted with datum planes which are arranged in single fitting jig. The plane in the die and the plane in the punch are simultaneously attached with the datum planes in the single fitting jig, so that the die is integrated with the punch by using the single fitting jig and is aligned with the punch in the same rotational phase.

The punch thus mutually aligned with the die is fixed to the punch holder, and the die is fixed to the die accepting base. After fixing the punch to the punch holder and also fixing the die to the die accepting base, the fitting jig is removed from the punch and the die, and then the punch can be driven so as to punch a hole in a work-piece. The above construction is suitable for mutually aligning the punch and the die, around an axis along which the punch moves, for punching a non-circular hole such as a rectangular hole.

As shown in Figs. 1 and 4 in the Falstrom reference, the die 10 is fixed to the bottom master bolster 2 by using the cross-key 6 which is inserted into the channel 4 in the bottom master bolster 2 and the channel 8 in the die 10. Also, the upper punch 9 is fixed to the master bolster 1 by using the cross-key 5 which is inserted into the channel 3 in the master bolster 1 and the channel 7 in the upper punch 9, so that the die 10 is positioned relative to the bottom master bolster 2 and the upper punch 9 is positioned relative to the top master booster 1. In other words, the punch and the die in the Falstrom reference are positioned relative to a means into which the punch or the die is to be fixed, and are not positioned with one another. Therefore, the punch and the die in the Falstrom reference are not simultaneously fitted to the datum planes in the single jig so as to mutually align in a corresponding manner.

As shown in Figs. 1 and 2 in the France reference, the top shoe 12 which faces to the bottom shoe 14 is supported by the guide post 16 and is movable along the longitudinal direction of the guide post 16. The France reference discloses the gage block 80, the gage post 82, and the dowel 78 so that the bottom shoe 14 does not rotate around the guide post 16, and also discloses another dowel 78 and gage post so that the bottom

shoe 14 does not rotate around the guide post 16. However, the France reference does not disclose a structure for positioning one of the top shoe 12 and the bottom shoe 14 with another. Specifically, the France reference does not disclose the planes which are formed in the punch and the die to contact with the datum planes in the single fitting jig so as to position the punch and the die in each other as specified in claim 1.

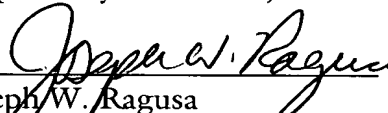
Because the cited references do not disclose a jig for positioning the punch and die in each other and having datum planes to be in touch with the punch and die, and the construction of the jig specified in claim 1 is not taught by a fitting jig of general interest, a person having ordinary skill could not have made the claimed punching apparatuses and the punching units.

Claim 9 is believed patentable for substantially similar reasons.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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